



PATENT APPLICATION  
CH8412-1  
LeA36555

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

IN APPLICATION OF )  
BENJAMIN MESEQUER, et al. ) GROUP NO.: 1713  
SERIAL NO.: 10/571,722 ) CONFIRMATION NO.: 7780  
FILED: MARCH 13, 2006 ) EXAMINER:  
TITLE: CHIRAL LIGANDS FOR )  
APPLICATION IN ASYMMETRIC )  
SYNTHESES )

**INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. 1.97(b)**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This disclosure statement under 37 CFR 1.97 & 1.98 is submitted before the first Office Action in order that the Patent and Trademark Office may consider the relevancy of certain information to the invention described and claimed in the subject application, and in compliance with the regulations concerning information disclosure statements.

Enclosed are copies of the following:

- a) the background art as cited in the application listed on the attached Form PTO-1449 (with the exception of U.S. Patents and equivalents);

**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an enveloped addressed to: Commissioner for Patents, Alexandria, VA 22313-1450.

Lisa Reagle

Name of person mailing paper or fee

*Lisa Reagle*

Signature

March 13, 2007

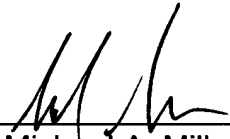
Date

- b) the Search Report received in the corresponding application pending in the European Patent Office, and an English language translation thereof; and
- c) the documents cited by the European Patent Office in the Search Report listed on the attached Form PTO-1449 (with the exception of U.S. Patents and equivalents).

Concise statements of the presently understood relevance of each of the documents are found in the specification filed.

This Information Disclosure Statement should not be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, that any document mentioned herein constitutes prior art, or that the documents listed severally or in any combination with one another or with any other information, are believed to render any claim in the subject application prima facie unpatentable.

Respectfully submitted,

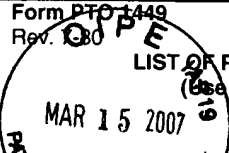
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Form PTO 1449 Rev. 12-00	U.S. Department of Commerce Patent and Trademark Office <b>LIST OF PRIOR ART CITED BY APPLICANT</b> (Use Several Sheets If Necessary)	Atty. Docket No. CH-8412-1/LeA36555	Serial No. 10/571,722
		Applicant Benjamin Mesequer	
		Filing Date March 13, 2006	Group 1713

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA	5,488,172	01/20/1996	Cereghetti, et al.			
	AB	5,801,261	09/01/1998	Laue, et al.			
	AC	6,162,929	12/19/2000	Foricher, et al.			
	AD	6,313,317	11/06/2001	Sayo, et al.			
	AE	6,340,107	01/22/2002	Cappa, et al.			
	AF	US 2002/0128501	09/12/2002	Zhang			
	AG	6,521,769	02/18/2003	Zhang			
	AH	6,844,462	01/18/2005	Drieben-Hölscher, et al.			

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

AI	Schmid, Rudolf, et al., "Axially Dissymmetric Bis(triaryl)phosphines in the Biphenyl Series, . . .", <i>Helvetica Chimica Acta</i> , Vol. 71. (1988), pp. 897-929.
AJ	Noyori, Ryoji, et al., "BINAP: An Efficient Chiral Element for Asymmetric Catalysis", <i>Acc. Chem. Res.</i> 1990, 23, pp. 345-350.
AK	Zhang, Xiaoyong, et al., "Highly Enantioselective Hydrogenation of $\alpha,\beta$ -Unsaturated Carboxylic Acids Catalyzed by $H_8$ -BINAP-Ru(II) Complexes", <i>Synlett</i> , July 1994, pp. 501-503.
AL	Zhang, Zhaoguo, et al., "Synthesis of Chiral Bisphosphines with Tunable Bite Angles and Their Applications in Asymmetric Hydrogenation of $\beta$ -Ketoesters", <i>Journal of Organic Chemistry</i> , 2000, 65, pp. 6233-6226.
AM	Miyashita, Akira, et al., "Synthesis of Atropisomeric 2,2'-Bis(dicyclohexylphosphino)-6,6'-dimethyl-1,1'-biphenyl (BICHEP) and Its Use in Rh(I)-catalyzed Asymmetric Hydrogenation of Prochiral Olefins", <i>Chemistry Letters</i> , 1989, p. 1851.
AN	Mashima, Kazushi, et al., "Chemoselective asymmetric hydrogenation of $\alpha,\beta$ -unsaturated carbonyl compounds to allylic alcohols catalysed by $[Ir(binap)(cod)]BF_4$ -aminophosphine", <i>Journal of Organometallic Chemistry</i> , 428 (1992) p. 213.
AO	Ikariya, Takao, et al., "Synthesis of Novel Chiral Ruthenium Complexes of 2,2'-Bis(diphenylphosphino)-1,1'-binaphthyl and their Use as Asymmetric Catalysts", <i>J. Chem. Soc., Chem. Commun.</i> , 1985, p. 922.
AP	Noyori, Ryoji, et al., "Rapid, productive and stereoselective hydrogenation of ketones", <i>Pure Appl. Chem.</i> , Vol. 71, No. 8, (1999) pp. 1493-1501.

EXAMINER

DATE CONSIDERED

EXAMINER Initial if references considered, whether or not citation is in conformance with MPEP 609: Draw line through if not in conformance and not considered. Include copy of this form with next communication to applicant.

\* Neither English Language Equivalent nor an English Language Translation is available.